
LEEWARD ISLANDS

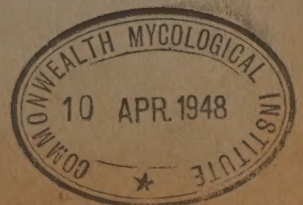
ANNUAL REPORT

OF

The Department of Agriculture

FOR

1945.



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SECTION I

AGRICULTURE IN THE COLONY

GENERAL

This report is presented in a form similar to that adopted in 1944 and consists of a summary of information abstracted from the individual Presidential reports, and reviews agriculture in the Colony and the work of the Department of Agriculture in general. The Chief Veterinary Officer, Leeward Islands, reports on the position of animal health and this attached report should be considered as a section of the main Colony report.

In general, it can be said that conditions throughout the year under review showed an improvement over those in 1944 with an increased rate of return to normal. There was definitely a noticeable improvement in the obtaining of essential agricultural supplies and the position in relation to the availability of markets and transportation of exportable products in no way deteriorated. For the first time in recent years, the entire crop of cotton lint was exported from Montserrat during the year in which it was grown.

It is gratifying to record that the total sugar production shows a considerable increase; there is also an increase in the yields of cane per acre.

In both Antigua and St. Kitts, the year's cotton production shows a definite increase due to the additional acreages as well as to the increased yields per acre both in Antigua and in St. Kitts, planted with this crop. The reduced production in Montserrat is attributable to unfavourable weather conditions.

The general position with regard to food production, compared favourably with that of the preceding year. The yam crop in Antigua was the largest ever reaped and was far in excess of the demand. Production of other food crops was affected by dry conditions in the early part of the year and there were shortages of ground provisions, but at other times there were surplus supplies.

It is also gratifying to record that there has been a marked improvement in the number of livestock available for meat purposes. However, it was still considered advisable to retain control measures with respect to the slaughter of certain classes of animals in order to maintain adequate breeding units.

The Agricultural Service, while handicapped at times owing to inadequacy of clerical staff, continued to carry out normal duties in addition to those associated with increased food production campaigns and the implementation of schemes under the Colonial Development & Welfare Act, especially in relation to the establishment of agricultural stations.

WEATHER CONDITIONS

The average rainfall in all of the Presidencies was below the mean rainfall figure and in addition, the distribution was decidedly uneven, November in all cases being an exceptionally dry month. The very dry conditions in the early months of the year adversely affected the planting of food crops as well as the establishment of the Montserrat cotton crop.

AGRICULTURAL INDUSTRIES

Sugar

ANTIGUA

In Antigua, the total production amounted to 20,663 tons grey crystals and 72 tons muscovado. Corresponding figures for 1942, 1943 and 1944 are shown with related statistics in Table 1.

TABLE I.

Year	Grey crystal Tons	Musca- vado Tons	Average cane yield per acre	Tons of cane per ton of sugar
1942 ..	21,656	192	22.9	8.71
1943 ..	21,550	235	18.3	7.99
1944 ..	16,280	120	16.7	7.47
1945 ..	20,663	72	17.26	7.15

Yields of cane per acre showed an increase with an island average yield of 17.26 tons per acre, and an estate average of 19.99 tons per acre.

The juice quality was excellent and the figure for tons of cane per ton of sugar averaged 7.15 for the entire crop. There was a further increase in the price of sugar and final payments to cane growers were 29/2.9832d. and 26/6 per ton to contractors and non-contractors respectively.

Prospects for the 1946 crop were good at the end of 1945, and this is estimated at 25,000 tons.

ST. KITTS

The rainfall during 1944 was not favourable for maximum growth of the cane crop. Production amounted to 28,543 tons grey crystals. Corresponding figures for 1942, 1943 and 1944 are shown with related statistics in Table 11.

TABLE II

Year	Grey Crystal	Average cane yield per acre	Tons of cane per ton of sugar
	Tons		Tons
1942 ..	33,661	27.19	8.38
1943 ..	32,161	29.01	8.25
1944 ..	27,621	22.75	7.71
1945 ..	28,543	26.22	7.90

According to returns from the estates, 8,580 acres were harvested for the crop as compared with 9,310 in 1944. The yields of cane per acre showed an increase with an average yield of 26.22 tons per acre as compared with 22.75 tons in 1944. The juice quality was not as good as in 1944, 7.90 tons of cane being taken to manufacture a ton of sugar as against 7.71 tons for the previous season.

Grinding operations were completed on 6th June, less than 4½ months after the start of the crop.

There was an increase in the price of sugar and cane contractors received a final price of 27/3 per ton and non-contractors received 24/6.

The 1946 crop is estimated at 30,000 tons.

NEVIS

There has been a continued decline in the production of sugar cane in this island only 447 tons of cane were shipped to the St. Kitts Factory as against 1,349 tons for the previous crop. It is estimated that in addition to this, 600 tons were used for the manufacture of muscavado sugar for local consumption.

It appears from observations that the November planting of cane, has been much greater than has been usual for the past few years. This new interest in cane cultivation is a result of schemes submitted to provide for the organized marketing of peasants' canes.

ANTIGUA

COTTON

The 1945 crop was reaped from 1,129 acres and amounted to 189,922 lbs clean lint and 2,302 lb stains. Table III shows the 1944-45 production compared with the figures for the seasons 1938-39—1943-44.

TABLE III

Season	Acreage planted	Clean lint produced	Lint per acre
1938-39 ..	2,000	242,116 lb.	121 lb.
1939-40 ..	2,645	416,393 "	157 "
1940-41 ..	4,826	659,376 "	136 "
1941-42 ..	4,197	416,274 "	99 "
1942-43 ..	896	73,530 "	82 "
1943-44 ..	988	124,732 "	127 "
1944-45 ..	1,129	189,992 "	170 "

The area planted for the 1946 crop was 1,133 acres and at the end of December, prospects for the crop were good but unfortunately there was considerable doubt as to the question of markets.

ST. KITTS

In St. Kitts the acreage planted under cotton was considerably higher than during the previous season. The 1945 crop was reaped from 1,032 acres and amounted to 226,227 lb. of clean lint and 31,604 lb. of stains. Table IV shows the 1945 production compared with the figures for the seasons 1940-44.

TABLE IV

Season	Acreage planted	Clean lint produced	Lint per acre
1940 ..	1,709	436,858 lb.	256 lb.
1941 ..	1,400	239,496 "	171 "
1942 ..	1,530	139,862 "	92 "
1943 ..	1,100	169,015 "	154 "
1944 ..	342	47,560 "	139 "
1945 ..	1,032	226,227 "	219 "

With normal weather conditions, the usual planted acreages can be anticipated for the 1946 season.

ANGUILLA

The acreage planted under cotton in Anguilla remained at a low level and production for the season amounted to 4,385 lb of clean lint and 226 lb of stains from an estimated acreage of 70 acres. Table V shows the 1945 production compared with the figures for the seasons 1939-1940-1943-44.

TABLE V

Season	Acreage planted	Clean lint produced	Lint per acre
1939-40 ..	33	6,987 lb.	23 lb.
1940-41 ..	150	17,931 "	119 "
1941-42 ..	225	29,357 "	130 "
1942-43 ..	200	16,024 "	80 "
1943-44 ..	70	4,343 "	62 "
1944-45 ..	70	4,385 "	63 "

NEVIS

In Nevis the acreage planted for the 1944-45 season was slightly higher than that of the previous year—2,680 acres as compared with 2,544. Production amounted to 296,685 lb of clean lint and 18,169 lb of stains with an average yield of 111 lb of clean lint per acre. Table VI gives the production statistics during recent years.

TABLE VI

Season	Acreage planted	Clean lint produced	Lint per acre
1939-40 ..	3,000	465,053 lb.	155 lb.
1940-41 ..	4,000	518,242 "	130 "
1941-42 ..	4,500	579,148 "	129 "
1942-43 ..	2,573	186,081 "	72 "
1943-44 ..	2,544	287,892 "	113 "
1944-45 ..	2,680	296,685 "	111 "

It is estimated that from 1,500-2,000 acres have been planted for the 1945-46 season.

MONTSEERRAT

Montserrat production amounted to 514,349 lb of clean lint and 37,168 lb of stains from an acreage of 3,770 acres with an average production of 136 lbs of clean lint per acre. Production and yields in recent years are shown in Table VII.

TABLE VII

Season	Acreage planted	Clean lint produced	Lint per acre
1941 ..	5,395	1,128,724 lb.	209 lb.
1942 ..	4,467	579,190 "	130 "
1943 ..	4,005	611,752 "	153 "
1944 ..	3,074	569,534 "	185 "
1945 ..	3,770	514,349 ..	136 "

The weather was more favourable than in 1944 for the establishment of the crop, and the total acreage in 1945 was nearer the average for recent years.

The planting season opened on March 1st, and the weather enabled most growers, except those in the Windward and Southern Districts to establish their cotton early. The crop generally was very promising until the end of July, when the yield of clean lint was estimated at 1700 bales—the actual crop proved to be 1,225 bales. The decreased figure was due to unfavourable weather conditions which predisposed to a severe development of Black Boll, especially in the Windward District and on the higher lands in general.

Table VIII shows the relative areas planted under various systems of tenure in 1945 and in previous years.

TABLE VIII

Year	Peasants rented or freehold (acres)	Share croppers (acres)	Estate cultivation (acres)	Total (acres)
*9 year mean ..	1,777	1,518	969	4,265
1944	1,152	920	1,002	3,074
1945	1,726	982	1,062	3,770

Nine years—1934-1943, figures omitted for 1936, for which detailed acreages are not available.

This table shows that the decrease during the last 2 years in the total acreage planted as compared with recent years is mainly accounted for by the decreased area under the Share system. This decrease may be attributed to various causes, such as the emigration of peasants, the decreased fertility of marginal lands which used to be worked on the Share system and the availability of income from other sources. The establishment of the Otway Peasant Settlement in 1945 made some contribution towards increasing the area rented by peasants.

VIRGIN ISLANDS

No cotton was planted in the Virgin Islands as this crop has been almost entirely replaced by the growing of food crops for which there continues to be a lucrative market in St. Thomas, U.S. Virgin Islands.

MONTSEERRAT

LIMES AND LIME PRODUCTS.

Facilities for the export of these products were good and no sound raw lime juice was run to waste. Exports for the year are shown in Table IX in comparison with 1944 exports and average figures for the five year period immediately before the war.

TABLE IX

Product	Pre-war (5 years)	1944	1945
Green limes ..	93 barrels	15 barrels	3 barrels
Raw lime juice	66,772 gallons	49,548 gallons	36,572 gallons
Essenced oil ..	2,052 lb.	814 lb.	299 lb.
Distilled oil ..	177 "	555 "	593 "

Due to obscure causes the health of the lime trees has been most unsatisfactory for some years, during which time efforts have been made to effect improvement by planting budded trees. It is considered that the industry is not holding its own. Taking into consideration the quantities of juice run to waste during the war and the stock on hand at the end of 1945, it is calculated that production in terms of limes in both 1944 and 1945 was below the average for the previous ten years, the figures being as follows:

10 year average, 1934 to 1943.	1944	1945
8,926 barrels	8,286 brls.	8,709 brls.

NEVIS

COCONUTS.

The total production amounted to 420,770 dried nuts of which 194,000 were exported, the remainder being sold locally.

LIVESTOCK.

It is gratifying to report that the general position with regard to the numbers of livestock, especially meat producing animals, within the Colony has showed a decided improvement. However, in spite of the reviving interest displayed in the rearing of more animals, there is still an insufficiency of such products as fresh milk and eggs.

Although weather conditions were less favourable than in 1944, livestock owners were still able to maintain both the average standard of animal nutrition and the usual number of animals.

The position with regard to the demands made on the industry for supplying meat and meat products for local consumption has improved as a result of an increased supply of similar imported products. In Nevis, it was found possible to release a small number of meat producing animals for export. The Virgin Islands livestock industry maintained its export trade with the St. Thomas, U.S. Virgin Islands, and regular bi-monthly shipments were made under certification by the Department as required by the United States Authorities. The following table shows the exports for the year as compared with those of the preceeding year.

Year	Cattle	Sheep	Goats	Swine	Horses	Poultry	Total Value
1944 ..	1,136	523	1,636	498	1	2,713	£19,100
1945 ..	1,147	394	1,714	453	1	3,186	£19,866

With regard to the general position as to numbers of equines, this has shown considerable improvement and permitted after the Colony demands were satisfied, the export of a few of these animals to neighbouring islands at fairly good prices.

The average standard of animal health throughout the Colony was maintained and there were no outbreaks of any of the serious infectious and contagious diseases. The Chief Veterinary Officer reports in detail on animal diseases in his attached report and further comment on this aspect is unnecessary.

FOOD PRODUCTION.

As in 1944, increased food production to meet war and post-war-time needs of the Colony was maintained. In Antigua, the corn crop was smaller than in 1944, production of cornmeal being 2,495 bags of 98 lbs. as compared with 3,511 bags in 1944 and 2,745 bags in 1943.

In St. Kitts, the compulsory planting of food crops on the sugar cane lands of estates to the extent of 10% of the total acreage was continued. In Nevis, ground provisions, fruit and vegetables were produced in quantities sufficient to supply the local demand and to allow for an almost daily shipment to be made to St. Kitts.

In Montserrat, some estates cultivated small areas of food crops and the peasants produced fair quantities.

In the Virgin Islands as a result of unfavourable weather early in the year ground provisions were scarce, but the May rains assisted greatly in relieving this situation and permitted planting operations.

SECTION II

WORK OF THE DEPARTMENT OF AGRICULTURE

Investigational Work—Investigational Centres

MONTSERRAT

Cotton Station. The 1945 annual report of the Montserrat Sea Island Cotton Breeding Station has been prepared and will be published in the 1944—45 volume of the Empire Cotton Growing Corporation's reports.

The Station continued to serve as a central cotton breeding station and depôt for the Colony's seed supply. Progeny rows were grown non-replicated and the small bulks trial was maintained. Data for seed cotton character were collected and analysed and lint samples were forwarded to the Shirley Institute for hair and small scale spinning tests. Yields from the first multiplication area were good and there is a plentiful supply of seed for planting the second multiplication area next season.

Grove and Brades Stations. These centres were used for the production of food and fodder on a mixed farming basis, for the demonstration of soil conservation measures and as a source of planting material of proved varieties of various crops.

ANTIGUA

Greencastle Experiment Station. With the establishment of the Central Experiment Station (See D. & W. Scheme 465 page 14) it has been possible to plan for a reduction of the work to be conducted at Greencastle and possibly for a reduction in the area of the Station—the portion no longer required being included in the Greencastle Land Settlement area.

It is essential, however, that a cane nursery be maintained in order that the reactions of the new varieties to this soil type (which is nowhere included in the region of the new station) should be observed, and it also appears to be a suitable locality for the first multiplication of those received from the Quarantine Station.

Accordingly, work during 1945 was mainly based on the assumption that the sugar cane work would be continued on a reduced scale, that fruit propagation work should be continued and that the valuable orchard mainly citrus and mangoes, would be maintained, and extended.

Plots of fodder grasses were established for rapid propagation in order to supply planting material at the Central Experiment Station and on certain estates where special attention is now being given to improved animal husbandry.

In addition to the above centres, investigational work was carried out at (a) The Central Experiment Station, Antigua, (b) Agricultural Station, Bayfords, St. Kitts, (c) Agricultural Station, Virgin Islands. A report on these Stations is included in the sections dealing with the Development and Welfare Schemes.

Sugar Cane Investigation. As in the preceding year, the extensive investigational programme with sugar cane was continued both in Antigua and in St. Kitts.

In Antigua the following experiments were reaped:—

Varietal 17, Varietal Observation 12, Cultural 7, Manurial 4.

The following were laid down:—

Varietal 3, Varietal Observation 2, Manurial 2, for the 1946 crop and Varietal 7, Varietal Observation 7, Cultural 5 and Manurial 2, for the 1947 crop.

In St. Kitts. Five (5) Manurial experiments were reaped and the following laid down:—

Varietal 16, Cultural 2, Mulching and Manurial 1.

ANTIGUA

The results of these experiments were summarised and published. The outstanding varieties were found to be B.34104, B.37161 and B.37172. The following recommendations were made with respect to the 1945-47 crop.

Ecological Area	Per cent of Total Area		
	B.34104	B.37161	B.37172
Soils of Good Natural Drainage			
Wetherell Clay	100	—	—
Fitches	—	100	—
Wetherell-Fitches (Transitional)	—	100	—
Lighter soils of Blubber	—	—	—
Valley series	45	45	10
Ecological Area			
Soils of Poor Natural Drainage			
Gunthorpe & Tomlinson clays	30	60	10*
Lindsey clay	—	100	—
Otto	45	45	10
Bendal	—	90	10
Heavier soils of Blubber	—	—	—
Valley series	45	45	10

* B.37172 should be confined to non-calcareous areas of these soil types for the time being.

With respect to cultural methods, the following are the summarised results and recommendations:—

Drainage. Experiments on soils of poor natural drainage have shown that the drains between cambered beds should be sunk a few inches below the depth of tillage. Under the conditions which obtain on some areas of Gunthorpe clay it would appear advisable to sink alternate drains to a greater depth.

Spacing Interval. The use of mechanised equipment for tillage, weeding between the rows, and for reaping and loading cane in the field, requires the rows of cane to be spaced at intervals of six feet. Close planting within the rows has the merit of controlling weed growth along the lines of the stools. Experiments are under way to determine the effects on yield of increasing the standard intervals between the rows to six feet and of decreasing the intervals between the setts in the row. These experiments indicate that on soils of both good and poor natural drainage, equidistant spacing is not necessary to ensure maximum yield and that the interval between the rows can safely be widened to six feet.

The manurial experiments confirm the results obtained in the past with respect to the response of canes to both phosphate and nitrogen, and certain permanent manurial experiments indicate that over a period of six crops (2—Plant canes, 2—1st Ratoons and 2—2nd Ratoons), sulphate of ammonia together with superphosphate applied to both plant cane and ratoons has given gains in yield slightly greater than those resulting from pen manure alone supplied to the plant canes, but smaller than in those cases where the inorganics have been applied in addition to the pen manure.

These permanent manurial experiments are being continued as the cumulative effect produced by the same treatments applied season after season to the same plots, make it possible to distinguish effects which in any one season, or even in one rotation, might not be great enough to show statistical significance.

ST. KITTS

The results of the experiments were summarized and published and the following recommendations made with regard to varieties for planting:—

On the lower and middle lands of intermediate rainfall and on the wetter middle lands, B.37161 is recommended as a main variety with B.34104 on the fringes and in areas with deep topsoil where arrowing is likely to limit cane growth.

On the drier lower lands B.3439 should be grown in those areas for early reaping both as plants and ratoons, B.37161 should be planted for reaping during the remaining months of the crop season and in all areas where B.3439 is known to uproot, whether reaping is to be early or late.

Insufficient information is available for any recommendations to be made with respect to varieties best suited to the wetter higher lands.

The results of the routine tillage experiment indicated that no immediate or cumulative gain in yield of plant and ratoon cane has been found to result from this procedure (as distinct from weeding).

The results of the manurial experiments with Sulphate of Ammonia and Nitrate of Ammonia indicated that, in the one experiment in which a definite result was obtained, the former gave a larger gain than the latter.

Extension Services

As in the preceding year the Extension Services of the Department were maintained. These services included general assistance with Committees, Societies, and work in connection with Land Settlement and Peasant Agricultural Development, and were carried out mainly through Settlement Councils. In addition, Officers of the Department assisted in measures such as soil conservation and mixed farming demonstrations on peasant lands and in the organisation of agricultural shows. Other activities included the writing and publishing of special articles in the press. Papers also were read and discussed at meetings of the Agricultural Societies of Antigua and St. Kitts. The St. Kitts Department issued a monthly "Letter of Advice to Peasant Farmers."

In Antigua "Settlement Councils" and in St. Kitts "Land Settlement" Committees have been formed under the guidance of the Department. These bodies function in an advisory capacity only and have proved very successful in advising on settlement affairs, particularly in such matters as selection of suitable candidates for allotments and in connection with the question of loans.

The need for continued and increased food production was stressed and its importance pointed out to the peasants especially through the agency of the Agricultural Instructors and Demonstrators.

Peasant land settlement schemes were maintained in Antigua and St. Kitts-Nevis.

ANTIGUA

Twenty (20) settlement areas with a total acreage of 9,178 acres were being developed under the control of the Department in some cases and under the control of the Land Settlement and Development Board in others. (See Development and Welfare Scheme D.282—Land Settlement and Development Board—Antigua).

The work on soil conservation has emerged from the essentially experimental and demonstrational stage and during the year 134 acres have been contoured and bunded. Most of this work has been done on Government controlled settlement areas, but a few independent peasants have taken advantage of the help offered by the Department in this matter.

Considerable repairs, alterations and additions were made to buildings on the settlements and water catchment and storage facilities improved.

Demonstration areas and stud centres were maintained both in Antigua and Barbuda and cane nurseries and vegetable seedling depôts were operated. The services of various stud animals were also available and 35 bull, 57 boar and 3 ram services are recorded.

ST. KITTS-NEVIS

Progress on the existing settlements in St. Kitts was maintained and the financial position can be regarded as satisfactory. Soil conservation work is being continued and should be completed by the end of 1946.

The next developmental feature required is the building of cottages and community halls on these settlements.

Stud animals such as bulls and boars were maintained at these centres and their use encouraged.

In Nevis, all of the allotments on the 9 land settlement areas are occupied except where soil conditions do not justify tenancy. Two muscavado sugar factories are operated on these settlements.

Stud animals including bulls, jacks, boars, ram sheep and buck goats were maintained at six of these settlements.

Marketing and Credit Facilities

The marketing facilities maintained by the Department continued along lines similar to those followed in the preceding year. Marketing Officers acted as agents for the Ministry of Supply in the purchase of the cotton crop.

Processing of corn into cornmeal was carried out in Antigua, St. Kitts and Montserrat, principally in Antigua where the corn factory was enlarged.

In Antigua, there was an increase in the tonnage of peasants' cane handled by the Department, viz 8,008 tons as against 7,177 tons in 1944.

The group marketing of canes which was initiated at the Clare Hall centre in 1943 was continued there and expanded to a new centre at Matthews. Improved methods of transport of cane are required if the co-operative system of weighing at these centres is to be extended, as is highly desirable.

In St. Kitts the crop grown by allottees at the settlements of Fahies and Saddlers was marketed through the Department.

In Montserrat, small shipments of vegetables for export were handled through the Marketing Dépôt which is also responsible for the importation and retailing of seeds and general estate stores especially in relation to the cotton industry.

Credit facilities were available for (a) cultivation and fertilizers, (b) purchase of livestock, (c) agricultural implements, (d) housing.

Soil Conservation

An annual progress report on soil and water conservation measures during the year 1944 was submitted to the Inspector General of Agriculture. In this report it was claimed that a sufficiently large area has been developed under soil conservation measures to serve the needs of the Colony as far as demonstration measures were concerned and it was considered that these demonstrations will give ocular proof of the necessity for the application of such practices. Accordingly, the policy adopted during 1945 was one of emphasising the serious nature of soil erosion and of encouraging the planting community to undertake approved soil conservation practices. The work carried out in the Presidencies may be summarized as follows:—

(a) ANTIGUA

Work was carried out both on estate and peasant lands, that on the former being applied to cane fields. On one estate four fields of total area approximately 25 acres and on another one field of 8 acres were contour cultivated. At the latter site the field had suffered badly from erosion in the past but after contouring and before the establishment of the cane cover, stood up well to quite heavy rain.

While progress with this work on estate lands has been continued, it has been slower than expected. This appears to be due mainly to two facts, the insistence on the part of labour on reaping comes on the basis of the line of 100 ft. instead of by the ton and the high cost of finishing the short banks and ends by hand work where there is not sufficient room for the plough to turn. It is hoped to be able during 1946 to adopt a method of ploughing used on contoured areas in Southern Africa which almost entirely obviates the need for hand work.

On one estate, devoted to cotton cultivation, the owner has become interested in combining soil conservation measures with labour saving devices in the cultivation of this crop. One field of about 6 acres was properly bunded while some effort was directed towards the reduction of erosion and run-off on the rest of the cotton area of approximately 50 acres.

The total area subjected to soil conservation measures of cultivation during 1945 amounted to approximately 198 acres.

(b) ST. KITTS

The general statement can be made with assurance that interest in soil conservation practices continues to increase and that the majority of sugar estate managers are taking adequate measures to check soil erosion on their properties. In this connection, the Agricultural Instructors assisted the management of the estates with the contouring of 200 acres of sugar cane lands. Peasant cultivators on controlled settlement areas are now convinced that cultivation on the contour is superior to the old methods and while progress is necessarily slow, the results so far achieved are definitely encouraging.

In addition to the contour bunding carried out on the St Kitts settlements, conservation measures were carried out on approximately 74 acres of Government owned land rented to peasant cultivators, as well as on certain lands at the Bayfords Agricultural Station.

In Nevis, work continued on controlled settlements and 262 acres were contour bunded during the year.

(c) MONTSERRAT

During 1945, the Agricultural Department carried out further conservation measures on the Otway Peasant Land Settlement and assisted with similar work on various small areas scattered over the island, thus increasing the already considerable number of soil conservation demonstrational areas. However, although interest in these practices is on the increase in Montserrat, it is evident that the urgent necessity for the extension and the maintenance of work already done is still insufficiently appreciated by the majority of the inhabitants.

During the year, the total area subjected to soil conservation measures amounted to 290 acres, the majority on controlled settlement areas.

(d) BRITISH VIRGIN ISLANDS

Soil erosion in these islands is not extensive and does not call for such active measures as in the other Presidencies. No specific work of this nature was undertaken during the year mainly owing to lack of trained personnel and equipment and to the fact that priority was given to the construction of animal buildings. However, with the appointment of an Officer trained in this work and the obtaining of some equipment, it will be possible to carry out some work of this nature during 1946.

In the meantime hill sides sparsely covered with scrub vegetation were cleared and close planted with guinea grass, thus affording an extension of grazing areas and at the same time providing soil cover which would prevent the start of erosion on these lands.

Colonial Development and Welfare

Schemes under the above Act and under the direction of the Department have not been included in the previous sections and are considered separately as follows:—

LEEWARD ISLANDS

The following schemes are being operated under the Federal Estimates:—

Schemes D.27 and D.32 Appointment of Chief Veterinary Officer and Director of Agriculture.

Both these schemes consist of free capital grants for the maintenance of the above posts on a Colony basis. The posts in question have been filled during the year.

Scheme D.13(ao) Agricultural Shows.

This scheme consists of a free capital grant of £360 over a three year period. From this grant, funds are allocated annually to the various Presidencies for assistance in the organisation of Agricultural Shows and the award of suitable prizes for the various competitive classes. Agricultural shows were held in Barbuda and the British Virgin Islands.

Barbuda

This was the second of the series and showed considerable improvement over the 1944 Show. It is hoped to make this an annual event.

British Virgin Islands

An initial show was held in November and was the first of its kind for over a period of twenty-five years. As was to be expected, the classes in live-stock predominated and included some outstanding exhibits.

Schemes D.90 and R.54 Control of Insect Pests on Food Crops.

Scheme D.90 which provided for the employment of an Entomologist for the investigation of food-crop insect pests of the Leeward and Windward Islands terminated at the end of March, 1945.

A new scheme R.54 was approved permitting the re-employment of this Officer, the object being to test the effectiveness of control measures based on the investigations carried out under the previous scheme.

The Entomologist was stationed in Antigua during the last quarter of 1945 when work consisted chiefly in field investigations into the efficacy and costs of different types of insecticide on a range of crops, together with preliminary tests of plant hormones as an auxiliary factor to promote thriftiness of food crop plants.

Scheme D.333(c) Training Junior Personnel outside the West Indian Area.

The grant under this scheme was continued towards the training at Macdonald College, Quebec, Canada, of a former member of the Department who was discharged from the R.A.F. on medical grounds. This student entered on the final session of a two year Diploma course in Agriculture, after having successfully passed in the first year.

ANTIGUA

The following schemes are being operated under the Antigua Estimates:—

Scheme D.27 Veterinary.

This scheme provided for the appointment of a Stock Inspector, a meat inspection service and the erection and maintenance of cattle dipping tanks. The post of Stock Inspector was discontinued during the year, the officer holding the post being transferred to the Virgin Islands where in view of the value of the livestock industry, an experienced stockman was needed.

The meat inspection service was maintained and is provided by the employment of a veterinarian on a part-time basis, this service being administered through the Medical Department.

The bi-monthly dipping service was maintained at the Morris & Brooks' dipping tank and the returns continue to show a steady and consistent increase in the number of animals dipped. During the year, a start was made on the construction of a second tank.

Scheme D.49 Forestry.

The situation with respect to work carried out under this scheme has not changed since 1944. Experiments with the growing of teak at two separated areas continued and observations made so far, seem to indicate that this tree is suited only to the better soils in Antigua.

In view of the appointment of a water engineer, the funds for fencing an important water catchment area have been allocated to this Officer.

Scheme D.202.

Under this scheme provision is made for the employment of an adequate clerical staff for the Department of Agriculture.

Scheme D.57. Agricultural Development.

The work under this scheme which consists mainly of field and market undertakings in connection with peasant agricultural development was continued. Repairs, additions and alterations were made to country marketing depôts as well as to peasants' cottages on settlements. This scheme also provides for the grant of £1,000 p.a. for five years to the Antigua Sugar Cane Investigation Committee.

Scheme D.282. Land Settlement & Development Board.

With the approval of this Scheme, a Land Settlement and Development Board was appointed in March 1945 composed of the Director of Agriculture as Chairman, two other officials, three non-officials and the Assistant Agricultural Superintendent as Secretary and Executive Officer. Pending the passing of appropriate legislation, which is now under consideration, and which will give members executive powers, the Board is functioning in an advisory capacity only.

The policy of the Board is directed towards the retention of ownership of all agricultural land which comes into its possession and the control of the development of such lands under a system of leasehold with security of tenure to suitable tenants.

A comprehensive report on the working of the Board during 1945 was prepared by the Secretary and is being submitted to the local Legislative Council and it is only necessary to summarise the work in this report.

During the year thirteen (13) meetings of the Board were held and in addition to routine business, a considerable amount of attention was given to the framing of required legislative measures.

Purchases of properties involving 2,455 acres at a cost of £19,685 were made in 1945, the purchase price including the cost of buildings and all live and dead stock. The majority of these properties are being developed as peasant settlements, part of one estate has been leased to large scale interests and one property is being reserved as a communal grazing ground for the adjacent villagers' livestock.

It was also possible to carry out additions and repairs to buildings on these properties as well as to effect improvement in the water supplies with reference to storage and catchment facilities.

Scheme D.465. Agricultural Development.

This comprehensive scheme for agricultural development provides financial assistance for:—

- (1) Establishment of a Central Experiment Station.
- (2) Staffing and other requirements of the Agricultural Department.
- (3) Rehabilitation of Estate Agriculture.

1. Central Experiment Station

Friar's Hill and portions of Wetherells, Langfords and Marble Hill were purchased during 1945 to provide a compact block of land representing three of the main soil types for use as a Central Experiment Station of an area of approximately 608 acres.

At the time of purchase, a portion of Friar's Hill was under very indifferent estate cultivation; Langford's was mostly under estate cultivation (canes), Marble Hill and Wetherells were under peasant cultivation, scrub, forest or indifferent pasture.

An immediate start was made in the development of both hillside and lower lands at Friar's Hill, although progress in the former was considerably delayed by the necessity of giving tenants of the former owners one year's notice to vacate or alternatively of paying compensation for disturbance. However, it was possible (a) to establish an area of fodder crops for soiling, (b) to clean and fence former pastures, (c) to cultivate four areas, two of which were converted into fenced paddocks, one used as a temporary cane nursery and the other for experiment and observation plots with pasture and fodder grasses.

The grass observations plots were laid down in order to permit observations of ability to compete with weed growth and of the response to fertilizers.

Varietal and Manurial experiments were laid down with the four (4) main fodder grasses, (a) Guinea Grass (*Panicum Maximum*), (b) Elephant Grass (*Pennisetum Purpureum*), (c) Guatemala Grass (*Tripsacum Laxum*), (d) Uba Cane (*Saccharum Sinense*). It will not be possible to record definite results on these experiments until in the 1946 report.

(a) *Livestock Development.* The maintenance of livestock as well as detailed investigation into the development of suitable types will play a major part of the work carried out at the Station, especially in view of the recommendations of the recent Royal Commission with respect to the development of animal husbandry in Antigua.

Cattle. In view of the definite success with the development of the Red Poll x Senegal cross in the British Virgin Islands, it was decided to maintain a small foundation herd of this breed for study, with the main policy directed towards the development of a dual purpose animal suitable both for estates and peasants. Accordingly a small unit of 10 cows, 11 heifers and 1 bull was collected at the Station; five calves, 3 bulls and 2 heifers were born during the year.

Equines. In keeping with the recommendations of the Antigua Agricultural Policy Committee, a light draught stallion of the French Canadian breed was imported for crossing with the native mares in an effort to produce a general utility type of animal. Three (3) native brood mares were maintained at the Station for riding and breeding purposes.

It was also decided to maintain a small ass stud both for the purpose of improving the local type of ass as well as to provide a suitable jack for mule breeding.

This unit consists of:—

An imported American jack.

" " " " Janet.

Two (2) locally selected janets.

(b) *Fodder Conservation.* The limiting factor in livestock raising in Antigua has been the difficulty in maintaining animals through the severe and often protracted dry season, when fodder is always scarce and there usually is a scanty water supply. Although experimental work in the past had indicated that good hay could be made from

Antigua Hay Grass (*Andropogon Cariococcus*) and that silage could be satisfactorily made in pit silos, no attempt has ever been made to conserve fodder on a large scale.

During 1945 however, some 40 tons of hay were made and three (3) silos of approximately twenty-four (24) tons total capacity were filled with silage made from Elephant and Guinea Grasses.

- (c) *Buildings*. A start was made on the construction of the offices to be used as headquarters of the local and federal departments of agriculture, (b) the laboratories for use by the Chief Veterinary Officer and Soil Chemist, (c) a library and lecture room. These buildings were nearly completed by the end of the year.

Stallion boxes to accommodate four (4) animals were completed and a dipping tank was constructed intended mainly for use by the Station animals but also available at a small charge to other livestock owners in the area.

- (d) *Water Conservation*. The importance of establishing an adequate and constant water supply was realized and considerable attention was given to improving the supply; this work will also be continued in 1946. A stone cistern of 30,000 gallons capacity was constructed to store the rain water from the large office and laboratory catchment surface, while the drains on each side of the road on Friar's Hill were concreted and connected with the main pond so as to benefit by the very considerable catchment area afforded by the long and wide asphalted road on the slope. In addition, the "lead-in" drain to a smaller pond was connected with the main road drain so as to collect some of the large volume of water which ordinarily ran to waste in every heavy rainfall.

An attempt was also made to clean out and deepen an old walled well reported at one time to have been a valuable source of supply on the estate. Unfortunately, just as the water bearing stratum was reached, heavy rains caused a subsidence of the wall and work had to be abandoned until the 1946 dry season.

2. Staffing and Other Requirements of the Agricultural Department.

Under this grant it was possible to provide for the increased staff needed in connection with the several Development schemes and for the financing of demonstrations etc., connected primarily with land settlement.

3. Rehabilitation of Estate Agriculture.

Under this Scheme, free grants and loans have been provided or sanctioned for (a) the purchase of agricultural machinery and implements, (b) facilities for transport, (c) for the purchase of livestock and for certain estate improvements connected with the development of dairy farming.

A Committee under the Chairmanship of the Director of Agriculture and consisting of three (3) officials, one non-official and the Agricultural Superintendent as Secretary has been appointed to administer the funds. Each application received for assistance, is carefully considered by this board and approval is only given if it is considered that the proposed development of the property in question is capable of being implemented. In each case, adequate security is demanded and when the cost of the scheme is estimated, one essential condition is that the applicant should defray 20% of the total cost. The remaining 80% is divided into 33 $\frac{1}{3}$ % free grant and 66 $\frac{2}{3}$ % loan in the case of Livestock and Dairy Equipment, and 25% grant and 75% loan in the case of assistance for machinery, implements, transport and estate improvements. All loans bear interest at 3% and are repayable over a period of 10 years by equated annuities.

The long delay between the placing of orders and the delivery of machinery has prevented the full benefits of this scheme from appearing in 1945, but

a considerable order for such merchandise to be financed by this Scheme had been placed before the end of the year and the four proprietors who had undertaken the establishment of dairy farming had made good progress to date.

ST. KITTS-NEVIS

Scheme D.288. Government Dairy & Agricultural Station, St. Kitts.

Substantial and steady progress was made with this scheme during the year under review.

(a) *Buildings.* The following were completed:—

- (1) Manager's house, (2) Stockmen's house (one unit of two semidetached cottages), (3) Two Bull Pens, (4) Piggery, (5) Poultry Feed, Store Room and Incubator Room, (6) Building to house Lighting Plant, Power Plant, Chaff Cutters, etc.

In addition to the above, a dipping tank was constructed, a sanitary unit consisting of three showers, three lavatories and a room for lockers was nearing completion; a concrete water tank of 4,800 gallons capacity was constructed and a main pipe line laid from the mountain supply to this tank.

(b) *Pasturage and Fodder Crops Development.* The clearing of pasture land for the establishment of fenced paddocks was continued and a water supply laid on. Elephant Grass (*Pennisetum Purpureum*) appears to be the best suited fodder and it is proposed to increase the acreage under this crop. Four and a half ($4\frac{1}{2}$) acres were cultivated and planted with Maize, Egyptian wheat and Soya Beans for animal feeding.

(c) *Livestock Development.*

Cattle. The Native Foundation herd is now headed by a Holstein Fresian bull from high milk record ancestry imported from Canada through the Dominion Department of Agriculture. This bull arrived in July and replaced the former high grade Holstein sire. This animal should prove very beneficial in accelerating the "grading-up" programme. The Native herd now consists of 32 cows and 23 calves—14 heifers and 9 bull calves. Careful records are being maintained on all of these animals, the desired aim being to establish ultimately a Holstein grade animal capable of producing fair quantities of milk under local conditions of management and husbandry.

Horses. The English Thoroughbred stallion "Hamoa" stood at stud during the year and 22 mares were served. Two foals, a colt and a filly, sired by this stallion, were born at the Station during 1945, both of these are very promising. A small number of native brood mares are maintained at the Station for breeding purposes.

Pigs. It was decided to maintain two separate breeds of pigs at the Station, Canadian Berkshires and American Duroc-Jerseys, in order to determine which of these appeared to be best suited for local conditions, especially when mated to the native sows in an effort to improve the existing poor type of pig. Accordingly, a Berkshire boar and 2 gilts and one Duroc-Jersey boar and three (3) gilts were imported. Observations, so far, show that both lots of pigs have grown well and maintained good condition. Two of the Berkshire and one of the Duroc-Jersey gilts have been mated and should farrow early in 1946.

Poultry. It was decided to establish a small unit of the Rhode Island Red breed which was considered the most suitable for local conditions as well as for "grading-up" operations on the native type of fowl through distribution of cockerels for breeding purposes. One hundred (100) Rhode Island Red chicks were purchased and received at the Station between March and May. From this number, ninety-six were raised of which 53 were pullets and 43 cockerels. The former were retained and the cockerels sold for breeding purposes.

An order has been placed with the Poultry Division of the Dominion Department of Agriculture, Canada, for five Rhode Island Red cockerels from high egg producing strains to be used on these pullets and on arrival at the Station breeding pens will be set up and hatching operations started. Until such time, all the selected pullets are being trap nested and careful records kept with a view to future pedigree hatching.

Scheme D.144. Agricultural Development in St. Kitts. The two Junior Agricultural Instructors employed under this scheme continued their work in connection with soil conservation on land settlement areas, and also gave assistance with contour work on sugar estates.

Scheme D.422. Government Veterinary Service—St. Kitts. This scheme provides for a Government Veterinary Service for St. Kitts, organized on the panel system with fixed rates of fees for panel and non-panel contributors. Subsequent to the arrival of the newly appointed full-time Veterinary Officer in the Presidency in February, 1945, and until such time as the new service could be inaugurated, a provisional service was rendered whereby veterinary attendance was provided on the call system at a fixed scale of fees. The new service came into effect as from 1st March, 1945, and at the end of the year there were twenty (20) contributing estates with a total registration of 1,472 animals classified as follows:—

Horses	....	....	....	....	136
Mules	....	....	....	....	208
Donkeys	....	....	....	....	19
Cattle	....	....	....	....	1,107
Sheep	....	....	....	....	2

In addition, service was rendered to non-contributors to the scheme. At this stage any appraisal of this venture would be both unwise and premature and a careful study is being made on the system as a whole so as to assess its true value during the trial period and decide whether it should be continued or replaced by a more suitable service.

NEVIS

Scheme D.54. Agricultural Development in Nevis. It was possible during the year (a) to carry out repairs to water storage tanks on the settlements, (b) to maintain Demonstration plots and Stud Centres.

Scheme D.218. Purchase and Development of Nisbetts Estate—Nevis.

This scheme applies solely to the Nisbetts settlement. There are twenty (20) allottees cultivating allotments at this centre, and a demonstration plot has been established for their guidance. Selected areas have been planted with suitable fodder crops and grasses and the stud services of a bull are provided.

Scheme D.343. Purchase and Development of Land Settlement Areas in Nevis.

This scheme applies to the New River and Maddens settlements, represented by the purchase of these two estates on the Windward side of the island in response to a long standing request for land settlement in this area. These areas are now being developed, lands are being put on the contour and fodder grasses established. There are 105 allottees on New River and 60 on Maddens.

MONTserrat

Scheme D.31. Agricultural Development—Montserrat.

Steady progress was continued throughout the year with development measures at the two selected centres. At one of these, Brades, good progress was made with soil conservation measures and the construction of animal buildings. In addition to the above, stud services were maintained and further soil conservation measures were carried out or supervised by the Department on neighbouring peasant and estate lands.

Schemes D.348 and D.447—Otway Peasant Settlement.

The first of these two schemes provided for the purchase of the estate and the second provided for an interim grant for their development. In addition to a fair amount of soil conservation work carried out during the latter part of 1944, a further 170 acres was grass-bunded, so that the greater part of the arable land has now been placed on the contour. There is keen demand for allotments.

VIRGIN ISLANDS

Scheme D.293 Agricultural Development—Virgin Islands.

In view of the Cattle Tick Free accreditation granted by the United States Authorities, it was possible to re-organize the previous comprehensive Tick Eradication programme and with the necessary approval, to re-draft the scheme under which the entire work of the Department is financed. Major changes were (a) the replacement of the previously required Veterinary Officer by an Agricultural Assistant possessing considerable experience in the handling and management of livestock, (b) the continuation of the modified dipping programme as in 1944.

Substantial and steady progress was made with the development of the Agricultural Station especially in relation to buildings and establishment of pastures and fodder crops.

The following buildings were constructed during the year:—

- (a) Agricultural Instructor's house.
- (b) Stables.
- (c) Cow shed.

In addition to the above, repairs and alterations were made to the Agricultural Assistant's house.

Pastures and Fodder Crops. Approximately 40 acres of scrub land were cleared, fenced and established in Guinea Grass (*Panicum Maximum*). In addition 4 acres of Guatemala Grass (*Tripsacum Laxum*) and 2 acres of Elephant Grass (*Pennisetum Purpureum*) were also established.

Livestock. Activities under this head were directed towards (1) the maintenance and control of the established export trade to St. Thomas and (2) the development of an improved type of beef animal for this market to which end "grading-up" experiments are being carried out with the Red Poll x Senegal cross.

Livestock Industry. During the year, livestock to the value of £19,866 were shipped to St. Thomas. All of these animals were examined and certified as being free from cattle ticks and Tuberculosis.

Livestock Improvement. Experiments are being conducted towards the development of an improved type of animal which will be more suitable for the export market, the desired policy being to improve the beef productive capabilities while still retaining the heat, tick and disease resistance powers of the native animal. For this purpose, grade Red Poll x Senegal bulls are being widely used on the native cows and observations, so far, show that the first cross is producing a very promising type of animal.

In addition to this work on cattle, two Thoroughbred stallions and two Berkshire boars were available for service, 70 mares and 13 sows being served.

SECTION III.

The Agricultural Policy Committee appointed by the Administrator of Antigua and under the Chairmanship of the Director of Agriculture, presented their report which was subsequently adopted by the local Legislative Council.

SECTION IV

Summary of Legislative Changes

ANTIGUA

Nil.

ST. KITTS-NEVIS

The Landing of Animals Prohibition Order, 1944 (S.R. & O. 1944, No. 1) prohibiting the landing of swine in this Presidency when brought from the Presidency of Montserrat was rescinded by the Landing of Animals (Rescission) Order, 1945 (S.R. & O. No.11).

MONTSERRAT

S.R. & O. No. 1 of 1945. Landing of Dogs Rescission Order.

VIRGIN ISLANDS

S.R. & O. No.5 of 1939 was rescinded and S.R. & O. No.1 of 1945 substituted.

L. R. HUTSON.

Acting Director of Agriculture.

6th June, 1946.

Report by the Chief Veterinary Officer, Leeward Islands Colony, on Animal Health in general during the year 1945

(A) Livestock in the Colony.

With the exception of the Virgin Islands where there is an approximate estimate of the animal population based on registrations during the tick eradication campaign, there are no vital statistics in respect of the numbers and classes of livestock in the Colony. However, it is hoped that very valuable information of this nature will be obtained as a result of the forthcoming general census which includes a section devoted to collective information on livestock in general.

The general position with regard to livestock in the Colony has been discussed elsewhere in the Annual Report of the Department of Agriculture and further reference is therefore considered unnecessary, except to state that the Veterinary section is connected with animal husbandry in all its aspects.

(B) General Position with regard to Animal Health.

The fortunate position enjoyed by the Colony as to freedom from the majority of the serious infectious and contagious diseases still continues. Bovine Tuberculosis continues to be the biggest offender in Antigua while Parasitism, especially internal and Malnutrition associated with a low standard of animal husbandry are observed throughout the Colony. However, during the year under review the average standard of animal health was maintained.

Weather conditions were on the whole less favourable than during 1944 especially in the Virgin Islands and in Barbuda, a dependency of Antigua, where a very dry period was experienced in an island where there is normally an insufficiency of pasturage, and the livestock in general suffered considerably.

No new diseases were reported during the year.

The following is a summary of observed and reported animal diseases:—

(1) BACTERIAL DISEASES.

In Equines	....	....	(a) Tetanus	
In Cattle	....	....	(a) Tuberculosis	(b) Mastitis
				(c) Pasteurellosis
In Pigs	....	....	(a) Tuberculosis	(b) Pasteurellosis
In Poultry	....	....	(a) Fowl Typhoid	

(2) VIRUS DISEASES.

In Poultry	....	....	(a) Leucosis Complex	(b) Fowl Pox
In Dogs			(a) Housedog Disease	

(3) DISEASES CAUSED BY SPIROCHAETA.

In Dogs			(a) Leptospirosis	
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(4) DISEASES CAUSED BY SPOROZOA.

In Cattle			(a) Piroplasmosis	(b) Anaplasmosis
			(a) Coccidiosis	
In Goats	....	....	(a) Coccidiosis	
In Poultry			(c) Coccidiosis	

(5) DISEASES CAUSED BY FUNGI.

In Cattle			(a) Ringworm	
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(6) PARASITISM.

In Equines, Cattle, Sheep, Goats, Pigs and Poultry				
(a) Helminthiasis		(b) Ecto-Parasites		

(7) MISCELLANEOUS DISEASES.

- (a) *Traumatic Injuries and Lameness*, including Canker, Seborrhoea and Laminitis.
- (b) *Diseases of the Alimentary System*—Bovine and Equine, including indigestion of various forms. Also those allied ailments attributable to Malnutrition and Avitaminosis.
- (c) *Diseases of the Respiratory System*—Coryza, Pneumonia, Epistaxis.
- (d) *Diseases of the Genito-Urinary System*.
Dystokia, Retained Placentae, Vaginal Rupture, Uterine Prolapse, Metritis, Paraphimosis (Dog), Venereal Tumours (Dog), Cystic Hematuria (Ox), Persistent Urachus (Calf).
- (e) *Diseases of the Nervous System*, including Encephelitis (Cow), Heat Stroke and Vertigo.
- (f) *Diseases of the Skin*—Eczema and Non-Parasitic Dermatitis.
- (g) *Poisoning*, including Lead, Hydrocyanic Acid and Strychnine.
- (h) *Deficiency Diseases* (Mineral).

REVIEW OF DISEASES.

The following call for comment:—

- (a) Bovine Tuberculosis
- (b) Equine colics—Epizootic colics (St. Kitts)
- (c) Parasitism.

(a) Bovine Tuberculosis.

The position with regard to the incidence of this disease in the Colony may be summarised briefly as follows:—

(1) ANTIGUA.

The incidence of the disease still continues to be high especially in the working cattle on the sugar estates. During the year 863 tests were carried on, mostly on estates with a 10.3% percentage of reactors. This disease is still the cause for the greater proportion of carcass condemnations at the St. John's Abattoir.

During the year a visit was paid to the island by Professor Wm. C. Miller, of the Royal Veterinary College, London, England, and he has submitted a comprehensive Scheme for island wide control and eradication measures. It is hoped to be able to implement these in the near future.

(2) ST. KITTS-NEVIS.

The resident Veterinary Officer reports as follows:—“A survey undertaken in 1944 established the incidence of the disease and disclosed the degree of infection in tested animals to be 5.5%.

During the year, many tests and retests were made with negative results but the disease continued to be the main cause of carcass condemnations at the Basseterre Abattoir.

The question of future Tuberculosis policy has been considered and it is now understood that comprehensive proposals for the eradication of this disease on a presidential basis will be submitted by the Chief Veterinary Officer for the approval of the local administration.”

(3) MONTSERRAT.

Following the initial survey made in 1944 when a percentage of .3% was found in a total number of 661 animals tested, a further test made on 235 animals failed to disclose any reactors. During 1945, legislation was enacted to prohibit the importation of all cattle unless accompanied by a negative tuberculin test certificate. Additional recommendations have been submitted for the continuation of the testing campaign and the provision of necessary supportive legislation. The results of the second testing programme tend to confirm the conclusion that in this island the disease can be readily eradicated by appropriate measures.

(b) Equine Colic—Enzootic Colic. (St. Kitts).

The Veterinary Officer, St. Kitts, has prepared a very comprehensive and instructive report on the incidence of this malady amongst Equines. This report is being submitted to The Honourable, The Secretary of State for the

Colonies as requested by the Colonial Office. In view of this, it is not considered that any useful purpose can be achieved by reviewing this report here and therefore, only a brief summary will be given.

During the year, 19 cases of colic were encountered in horses and mules of which number seven (7) animals died, or a percentage of mortality of 36.8%. Figures are also given as to the distribution of rainfall during the months that these cases occurred with a view of ascertaining the part which rainfall may be playing in association with the incidence of cases. Brief case reports are given and a resumé of post-mortem findings. The remainder of the report is given up to careful observations made on animal husbandry in general as practiced at the sugar estates and as a result of which the conclusion is reached, most justly, that quite apart from other factors, it should not be surprising that, under such conditions of husbandry and management, the incidence of digestive disorders in estate animals has been relatively high. The report concludes with a description of certain experiments which are being carried out with the co-operation of the St. Kitts Sugar Association, Limited, in an attempt to obtain information as to the cause of the high incidence of these colics during the last five years. These experiments were initiated on the suggestion of Professor Miller as a result of his visit to St. Kitts and are based on the theory of eliminating certain agents and practices which are suspected as being possible causes of the condition. The experiments, which are detailed in the report are being carried out on 10 different estates and 40 animals. Horses and mules are involved. In addition to these experiments, suggestions and recommendations were made to livestock owners in general as to establishment and practice of improved methods of animal husbandry, together with the dispensing of appropriate prophylactic agents during the considered critical seasons of the year.

At the moment, no report or conclusions can be presented as a result of these experiments, some of which are still in force. It should be possible to do so at a later date.

(c) Parasitism.

It is regretted that not much improvement in the situation with regard to internal parasitism can be recorded. However, the picture is much more encouraging with regard to the control of external parasites, mainly ticks. Four (4) new dipping tanks have been constructed so far, three, which are in operation in Antigua and one in St. Kitts-Nevis, are in addition to those which are being maintained in the Virgin Islands. The response to the use of the tanks in Antigua continues to be very encouraging and it is confidently expected that an increasing number of livestock owners will make use of this service in view of the marked improvement in the general condition of animals which are being regularly dipped.

The modified dipping programme continues in the Virgin Islands which area remains as one being accredited free of the cattle fever tick.

General.

The Veterinary section of the Department is responsible for measures directed towards the non-introduction and dissemination of diseases through imported and exported animals and this service was maintained during the year. A summary of legislative changes as affecting livestock appears elsewhere in the Departmental Report.

Publications.

(1) "Observations on the Use of Diethylstilbestrol in Rabbit Breeding" L. R. Hutson. Published in the Journal of The American Veterinary Medical Association Vol. CVII, No. 822, September 1945, pp. 143—144.

(2) "Further Observations on Canine Leptospirosis in Antigua, B.W.I." L. R. Hutson. Published in The Canadian Journal of Comparative Medicine. Vol. 9, No. 12, December, 1945.

L. R. HUTSON,
Chief Veterinary Officer.

Antigua,
8th February, 1946.

